



Managing geo-reference data within River Information Services – the RIS Index

Christoph Plasil, via donau

14.09.2011





Introduction

- RIS is built on four key services:
 - Inland ECDIS (electronic navigational charts)
 - Notices to Skippers (notices to mariners)
 - Electronic reporting (electronic submission of cargo/commodity)
 - Vessel tracking and tracing (Inland AIS)
- All services make use of (geo-)reference data



RIS reference data

- is used for (unique) encoding of information
- data sets are maintained by different organizations (RIS providers, authorities, standardization organizations)
- The RIS Index is a tool for geo-reference data management.



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SEPTEMBER 13 - 16, 2011

Westin Canal Place

New Orleans, Louisiana, U.S.A.



RIS Index data

- Unique object ID (ISRS location code)
e.g.: AT VIE 00001LOCKS 19212

- UN country code (2 digits)
- UN location code (3 digits)
- Fairway section code (5 digits)
- Object reference code (5 digits)
- Fairway hectometre (5 digits)

- Object coordinates (lat/lon)

- Additional attributes

- Object name
- Limitations
- ...

Official ISRS and Index data															Related IHCAs
Country	UN	Location	Object key	Waterway reference	Object code	Section code	Hectometre	Function	Object name	Location name	Waterway name	Lat	Long	Index	Pelated_EI
AT	VIE	00001	LHKP21	19211	ATVIE00001LHKP2119211	19211	Freudenau, rechte untere Telkkammer	Wien	Donau	48,1756	16,4769	29/7/19210			
AT	VIE	00001	LHKP22	19215	ATVIE00001LHKP2219213	19215	Freudenau, rechte obere Telkkammer	Wien	Donau	48,1760	16,4770	29/7/19210			
AT	VIE	00001	LHKR01	19201	ATVIE00001LHKR0119201	19201	Nussdorf, rechte Kammer	Wien	Wien-Donauleite	48,1753	16,4767	29/7/19201			
AT	VIE	00001	LHKR01	19212	ATVIE00001LHKR0119212	19212	Freudenau, linke Kammer	Wien	Donau	48,1765	16,4783	15/10/19202			
AT	VIE	00001	LHKR02	19212	ATVIE00001LHKR0219212	19212	Freudenau, rechte Kammer	Wien	Donau	48,1763	16,4779	15/10/19202			
AT	GFS	00001	LHKR01	19493	ATGFS00001LHKR0119493	19493	Grenzenstein, linke Kammer	Grenzenstein	Donau	49,3521	16,2410	29/7/19490			
AT	GFS	00001	LHKR01	19497	ATGFS00001LHKR0119497	19497	Grenzenstein, rechte Kammer	Grenzenstein	Donau	49,3520	16,2410	29/7/19490			
AT	GFS	00001	LHKR01	19809	ATGFS00001LHKR0119809	19809	Abenwrth, linke Kammer	Abenwrth	Donau	49,3779	15,8562	29/7/19809			
AT	GFS	00001	LHKR01	19805	ATGFS00001LHKR0119805	19805	Abenwrth, rechte Kammer	Abenwrth	Donau	49,3779	15,8562	29/7/19805			
AT	JAHN	00001	LHKR01	19805	ATJAHN00001LHKR0119805	19805	Abenwrth, linke Kammer	Abenwrth	Donau	49,3779	15,8562	29/7/19805			
AT	MEL	00001	LHKR01	20302	ATMEL00001LHKR0120302	20302	Mels, linke Kammer	Mels	Donau	49,2260	15,3016	29/7/20302			
AT	FBU	00001	LHKR01	20303	ATFBU00001LHKR0120303	20303	Ybbs-Pfeuerbach, linke Kammer	Per-verkeug	Wien	49,1805	15,0732	29/7/20303			
AT	PRKU	00001	LHKR02	20603	ATPRKU00001LHKR0220603	20603	Ybbs-Pfeuerbach, rechte Kammer	Per-verkeug	Wien	49,1905	15,0732	29/7/20603			
AT	VIE	00001	LHKR01	20956	ATVIE00001LHKR0120956	20956	Waltsee, linke Kammer	Waltsee	Donau	49,1690	14,6932	29/7/20956			
AT	VIE	00001	LHKR01	20958	ATVIE00001LHKR0120958	20958	Waltsee, rechte Kammer	Waltsee	Donau	49,1690	14,6932	29/7/20958			
AT	VIE	00001	LHKR01	21197	ATVIE00001LHKR0121197	21197	Abenwrth, linke Kammer	Abenwrth	Donau	49,3779	15,8562	29/7/21197			
AT	AAD	00001	LHKR01	21197	ATAAD00001LHKR0121197	21197	Abenwrth, rechte Kammer	Abenwrth	Donau	49,2607	14,4310	29/7/21197			
AT	GSH	00001	LHKR01	21471	ATGSH00001LHKR0121471	21471	Oberwiesen, linke Kammer	Oberwiesen	Donau	49,3114	14,1476	29/7/21470			
AT	SGC	00001	LHKR01	21475	ATSGC00001LHKR0121475	21475	Oberwiesen, rechte Kammer	Oberwiesen	Donau	49,3104	14,1476	29/7/21475			
AT	ASC	00001	LHKR01	21628	ATASC00001LHKR0121628	21628	Aschach, linke Kammer	Aschach	Donau	49,3650	14,0201	29/7/21628			
AT	VIE	00002	TURB	00008	ATVIE00002TURB00008	00008	Wendepunkt Nussdorf Donauland	Wien	Wien-Donauleite	49,2655	16,3710	29/7/19190			
AT	VIE	00002	TURB	00008	ATVIE00002TURB00008	00008	Wendepunkt Ybbsflussmündung	Wien	Wien-Donauleite	49,2126	16,3868	15/10/19190			
AT	XXX	00001	TURB	00008	ATXXX00001TURB00008	00008	Wendepunkt Ybbsflussmündung	Wien	Wien-Donauleite	49,2126	16,3868	15/10/19190			
AT	HA	00001	TURB	01848	ATHA00001TURB01848	01848	Wendepunkt Hörnburg	Hörnburg	Donau	49,1490	16,2023	15/10/18480			
AT	VIE	00001	TURB	01848	ATVIE00001TURB01848	01848	Wendepunkt Freudenau	Wien	Donau	49,1692	16,4942	15/10/18480			
AT	VIE	00001	TURB	01245	ATVIE00001TURB01245	01245	Wendepunkt Praterbrücke	Wien	Donau	49,1649	16,4491	29/7/19193			
AT	PRKU	00001	TURB	01245	ATPRKU00001TURB01245	01245	Wendepunkt Praterbrücke	Wien	Donau	49,1649	16,4491	29/7/19193			
AT	ENA	00001	TURB	00005	ATENA00001TURB00005	00005	Wendepunkt Einhahnen	Enz	Donau	49,2301	14,5104	15/10/21210			
AT	UNZ	00001	TURB	00005	ATUNZ00001TURB00005	00005	Wendepunkt Schwerghäfen	Linz	Donau	49,2674	14,3633	15/10/21210			
AT	UNZ	00001	TURB	21389	ATUNZ00001TURB21389	21389	Wendepunkt Linz	Linz	Donau	49,3074	14,2626	15/10/21389			
AT	XXX	00001	TURB	21389	ATXXX00001TURB21389	21389	Wendepunkt Linz	Linz	Donau	49,3074	14,2626	15/10/21389			
AT	XXX	00001	TURB	19415	ATXXX00001TURB19415	19415	Wendepunkt Koningsbau	Koningsbau	Donau	49,3374	16,3343	29/7/19415			
AT	YBB	00001	TURB	00004	ATYBB00001TURB00004	00004	Wendepunkt Keirstock	Keirstock	Donau	49,3822	15,4623	29/7/19415			
AT	YBB	00001	TURB	00004	ATYBB00001TURB00004	00004	Wendepunkt Ybbs	Ybbs	Donau	49,1739	15,0901	29/7/20705			
AT	YBB	00001	TURB	00002	ATYBB00001TURB00002	00002	Wendepunkt Obersieben	Most	Donau	49,2772	14,2607	29/7/20705			
AT	UNZ	00001	TURB	00002	ATUNZ00001TURB00002	00002	Wendepunkt Obersieben	Most	Donau	49,3071	14,2607	29/7/20705			
AT	UNZ	00001	TURB	00009	ATUNZ00001TURB00009	00009	Wendepunkt Linz	Linz	Donau	49,3071	14,2641	29/7/20709			
AT	XXX	00001	TURB	21443	ATXXX00001TURB21443	21443	Wendepunkt Währing	Währing	Donau	49,3290	14,1788	29/7/21443			
AT	PRKU	00001	TURB	21443	ATPRKU00001TURB21443	21443	Wendepunkt Achensee	Achensee	Donau	49,3019	14,5033	29/7/21443			
AT	TMR	00001	B0012	19913	ATMR00001B001219913	19913	Strassenbrücke Traunauer	Traunauer	Donau	49,3659	15,2225	29/7/19913			
AT	TMR	00001	B0013	19913	ATMR00001B001319913	19913	Strassenbrücke Traunauer	Traunauer	Donau	49,3852	15,2217	29/7/19913			
AT	TMR	00001	B0014	19913	ATMR00001B001419913	19913	Strassenbrücke Traunauer	Traunauer	Donau	49,3858	15,2203	29/7/19913			



Geo-ref. data production (AT)

- Orthophoto / GIS Data
- IENC production
- Object properties in IENCs
- IENC – RIS Index converter
- Use of RIS Index for RIS Services (NtS, ERI, VTT, additional non-standardized services)



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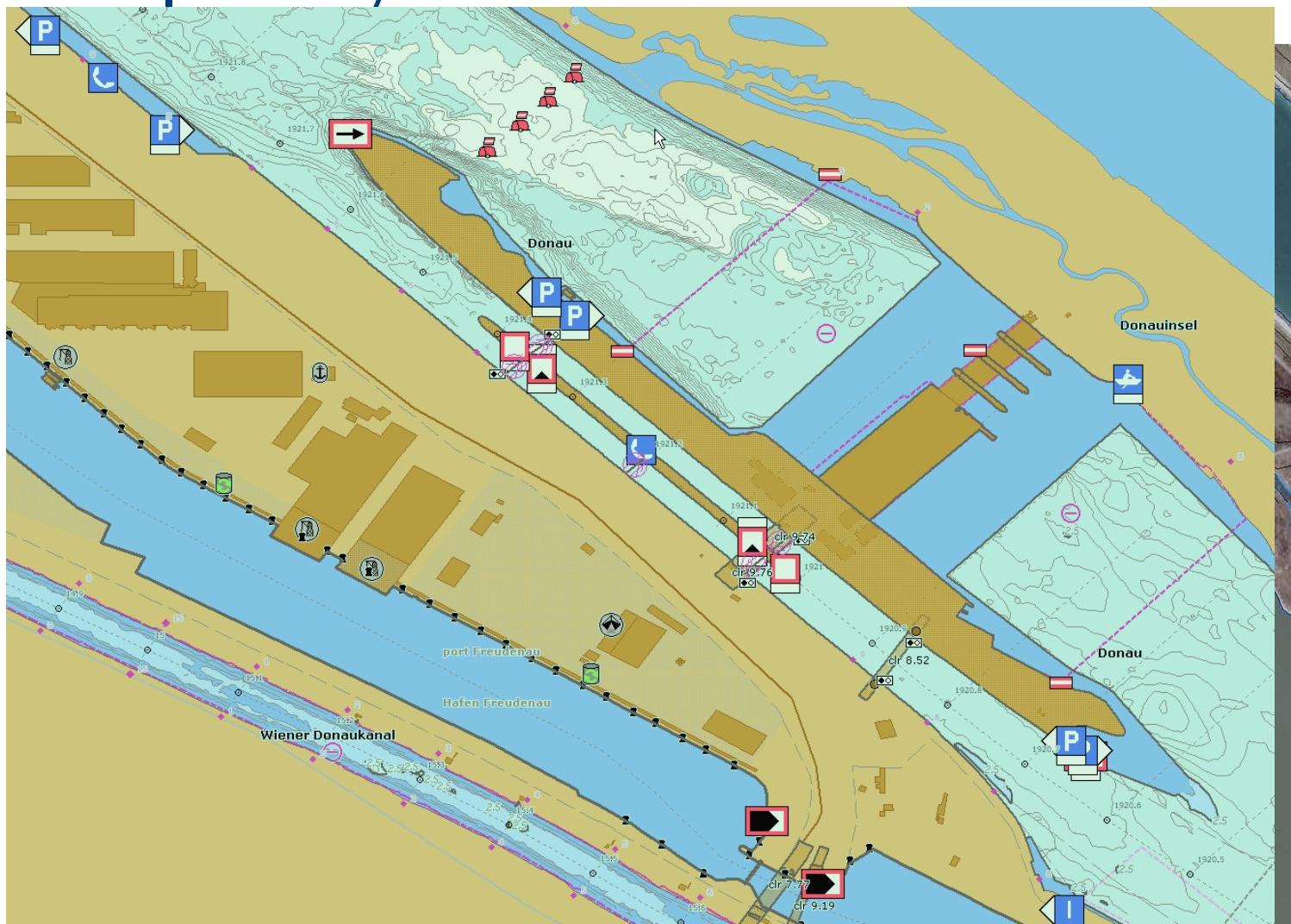
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Westin Canal Place

New Orleans, Louisiana, U.S.A.



Orthophoto / GIS -> IENC

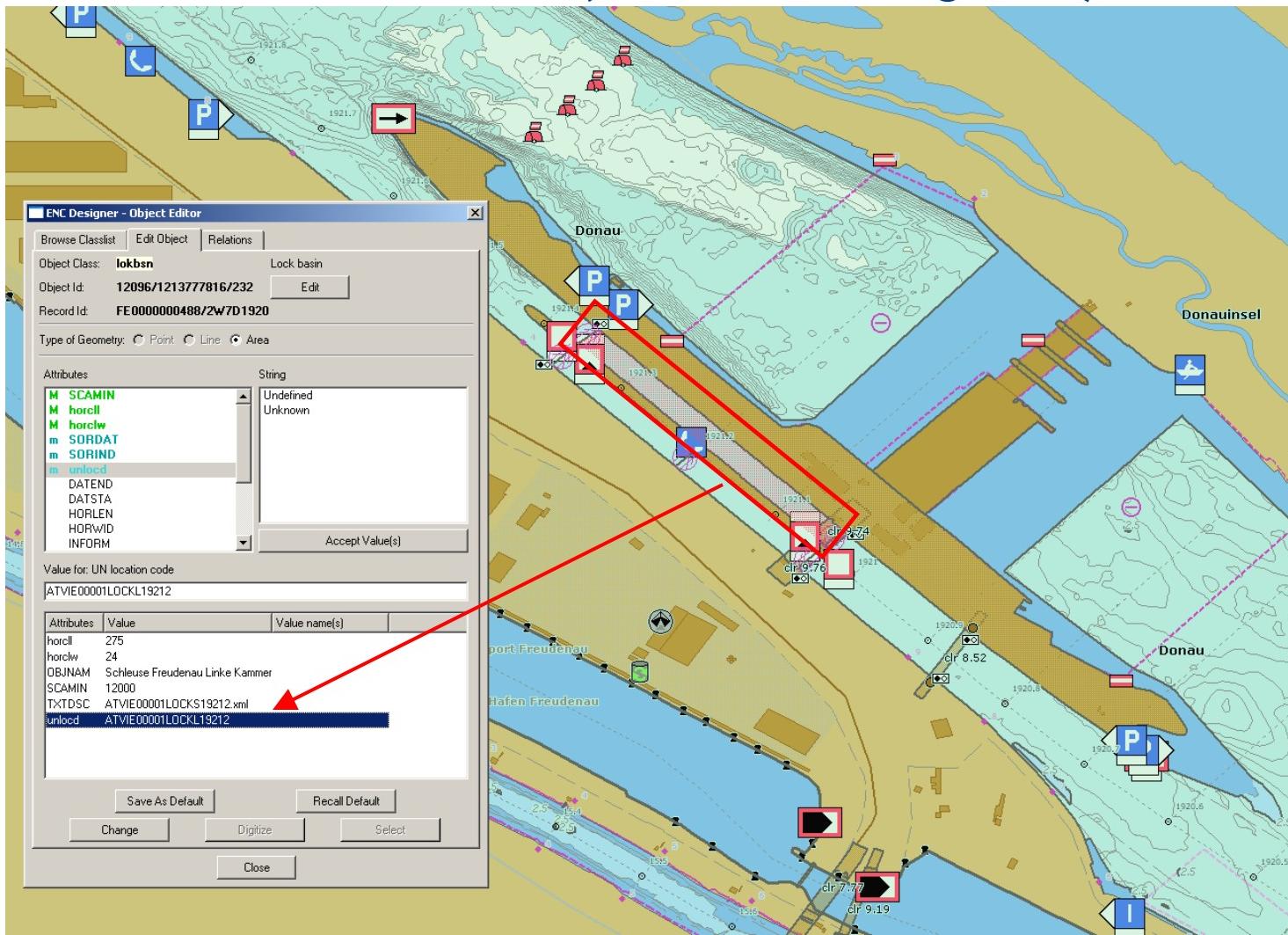




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ISRS location code (IENC Designer)

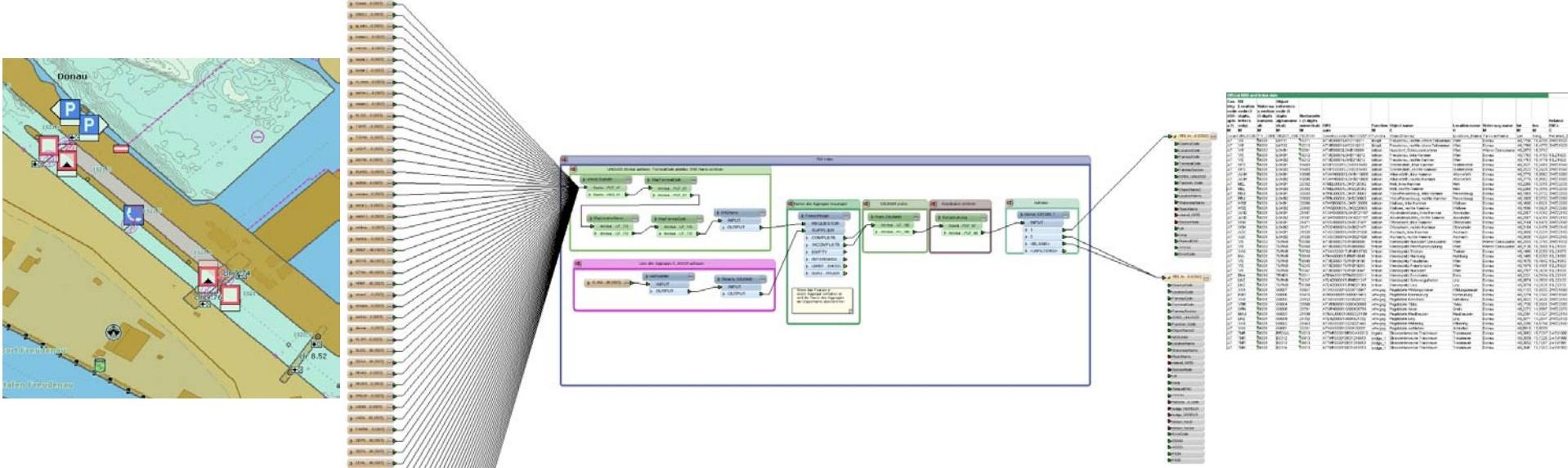
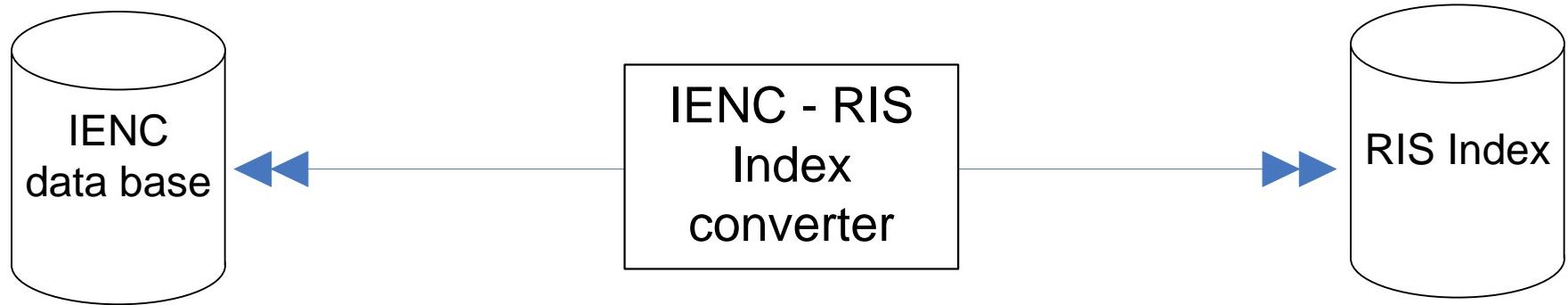




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IENC - RIS Index converter



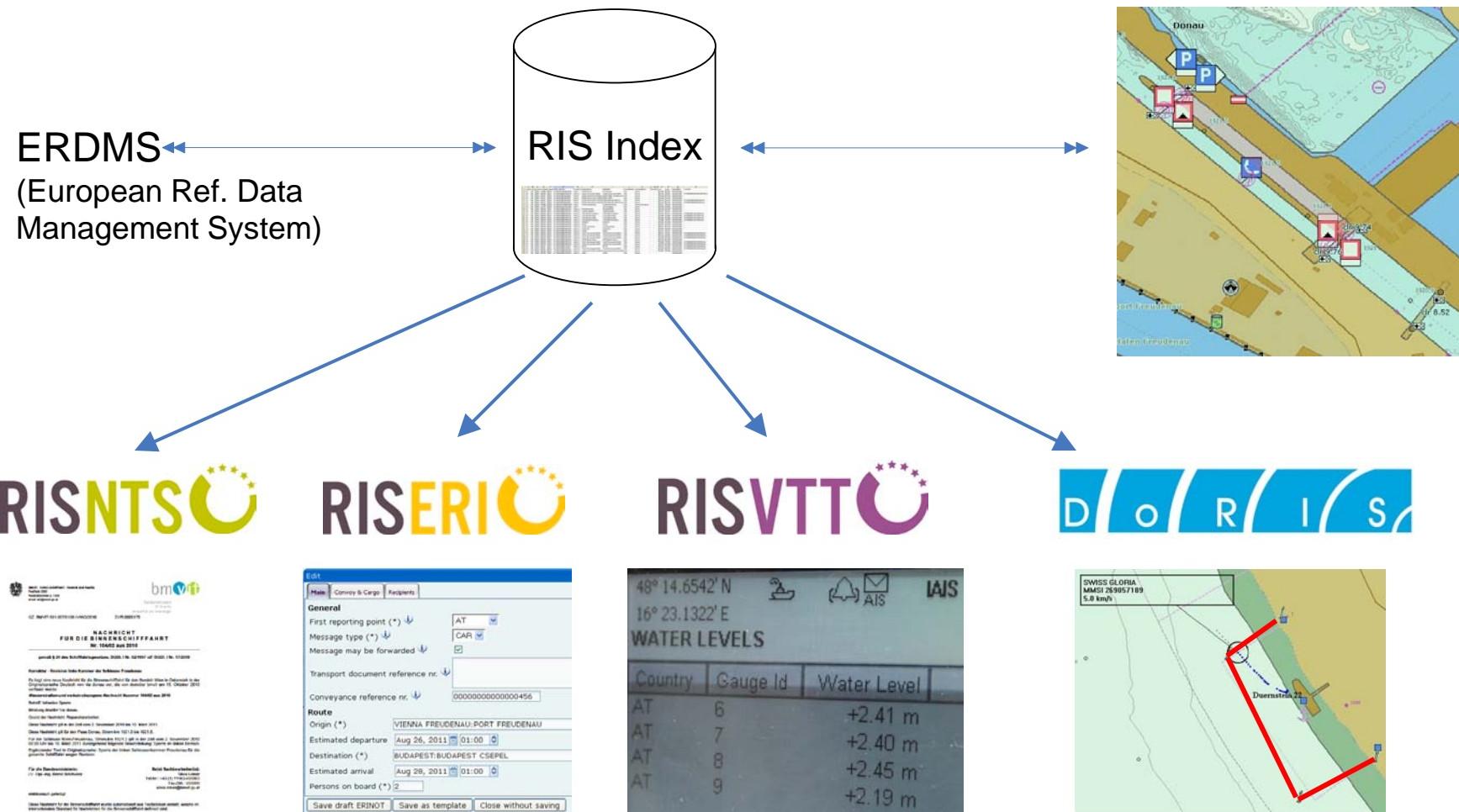


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RIS geo-ref. data flow



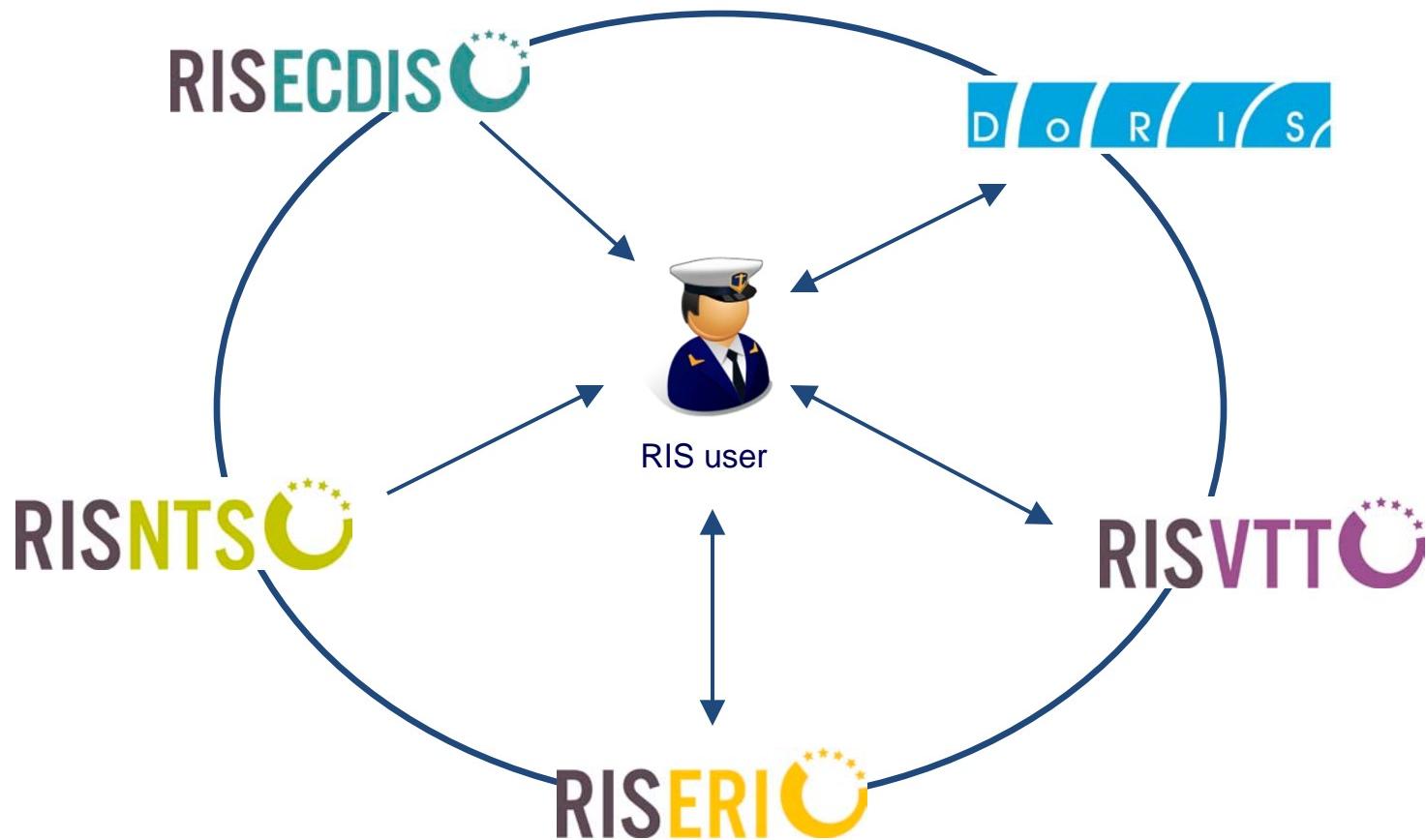


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Interoperability





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Geo-information in NtS message

```
<object>
  <geo_object>
    <id>ATVIE00001LOCKS1</id>
    <name>Wien-Freudенau</name>
    <type_code>LCK</type_code>
    <coordinate>
      <lat>48.17647214</lat>
      <long>16.4779878</long>
    </coordinate>
  </geo_object>
  <limitation>
    <limitation_period>
      <date_start>2010</date_start>
      <date_end>2011-03-10</date_end>
      <time_start>08:00</time_start>
      <interval_code>C</interval_code>
    </limitation_period>
    <limitation_code>OBS</limitation_code>
    <position_code>LE</position_code>
  </limitation>
</object>
```



[Full text message](#)

Revision linke Kammer der Schleuse

A new notice for skippers is available for Wien in AT

The fairway and traffic related message

Subject: Partial obstruction

Published by the Via donau.

Reason for the message: Repair.

This message is valid from 2. November 2010

This message is valid for the river Donau, river km

For the lock Wien-Freudенau, river km 1921.2 is vi

Additional text in national language: Sperre der linken

[Back](#)



Retrieval of the official Notices to Skippers, which are according to the international standard for Notices to Skippers. For remarks or questions to this service please contact the correctness of the data.

[Here](#) you can find further information. Download [user](#)



BMVIT - IV/M2 (Schifffahrt - Technik und Nautik)
 Postfach 3000
 Radetzkystraße 2, 1030
 email: w2@bmvit.gv.at

GZ. BMVIT-591.007/0138-IV/M2/2010

DVR:0000175



Bundesministerium
 für Verkehr,
 Innovation und Technologie

N A C H R I C H T FÜR DIE B I N N E N S C H I F F F A H R T Nr. 104/02 aus 2010

gemäß § 24 des Schifffahrtsgesetzes, BGBl. I Nr. 62/1997 idF BGBl. I Nr. 17/2009

Korrektur - Revision linke Kammer der Schleuse Freudенau

Es liegt eine neue Nachricht für die Binnenschifffahrt für den Bereich Wien in Österreich in der Originalsprache Deutsch vor, die von dem/der bmvit am 15. Oktober 2010 verfasst wurde:

Wasserstraßen-und verkehrsbezogene Nachricht Nummer 104/02 aus 2010

Betreff: teilweise Sperre

Meldung des/der Via donau.

Grund der Nachricht: Reparaturarbeiten.

Diese Nachricht gilt in der Zeit vom 2. November 2010 bis 10. März 2011.

Diese Nachricht gilt für den Fluss Donau, Strom-km 1921.0 bis 1921.5.

Für die Schleuse Wien-Freudенau, Strom-km 1921.2 gilt in der Zeit vom 2. November 2010 08:00 Uhr bis 10. März 2011 durchgehend folgende Beschränkung: Sperre im linken Bereich.

Ergänzender Text in Originalsprache: Sperre der linken Schleusenkammer Freudенau für die gesamte Schifffahrt wegen Revision.

Für die Bundesministerin:
 i.V. Dipl.-Ing. Bernad Birkhuber

Ihr(e) Sachbearbeiter(in):
 Silvia Leiner
 Tel.Nr.: +43 (1) 71162-655903
 Fax-DW: 655999
 silvia.leiner@bmvit.gv.at

elektronisch gefertigt

Diese Nachricht für die Binnenschifffahrt wurde automatisiert aus Textblöcken erstellt, welche im internationalen Standard für Nachrichten für die Binnenschifffahrt definiert sind.



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NtS display in ECDIS viewer

TRESCO INLAND ECDIS Viewer 8.4.0 Shore-Based PERISKAL Масштаб 1:2812 Ориентация: 0.0°

Chart Screen Navigation Logbook Routeplanning remarks NTS AIS Hymedis Shore-Based Settings Help

Plan Monitor Std USR All Screen Navigation Routeplanning remarks Symbols Simulation Ais Voyage

Scale Scale

2120 4 Treibpoller nicht auf Mittelmauer

UKW22

nube Danube

13:54:21

Mauthausen
453 ▲ 06/12/07
▼ 9:00:00

GLLWs

GPS info

Lat: *****
Lon: *****
SOG: *****
COG: *****
Q-GPS1: INVALID

Measure

from: 0,00°
Distance:

Waypoints Cursor ISRS

Distance: 0 Km River km. 0 Km

VHF: TEL: Length: Width: Height:

Fairway

Sender of the message : via donau
Country where message is valid : AT
District/region within country: Abwinden

Target group code :
Subject : Partial obstruction
Reason of notice : Repair
Period of validity : 19-10-2007
14-12-2007
Name of Geo object : Donau
Abwinden/Asten
Kind of limitation : Blockage
Kind of limitation period : -

Communication channel info section :

Contents : Die rechte Schleusenkammer der Schleuse Abwinden ist wegen Reparaturarbeiten nach einer Havarie gesperrt.
Notice source (authority) : Schleusengruppe West

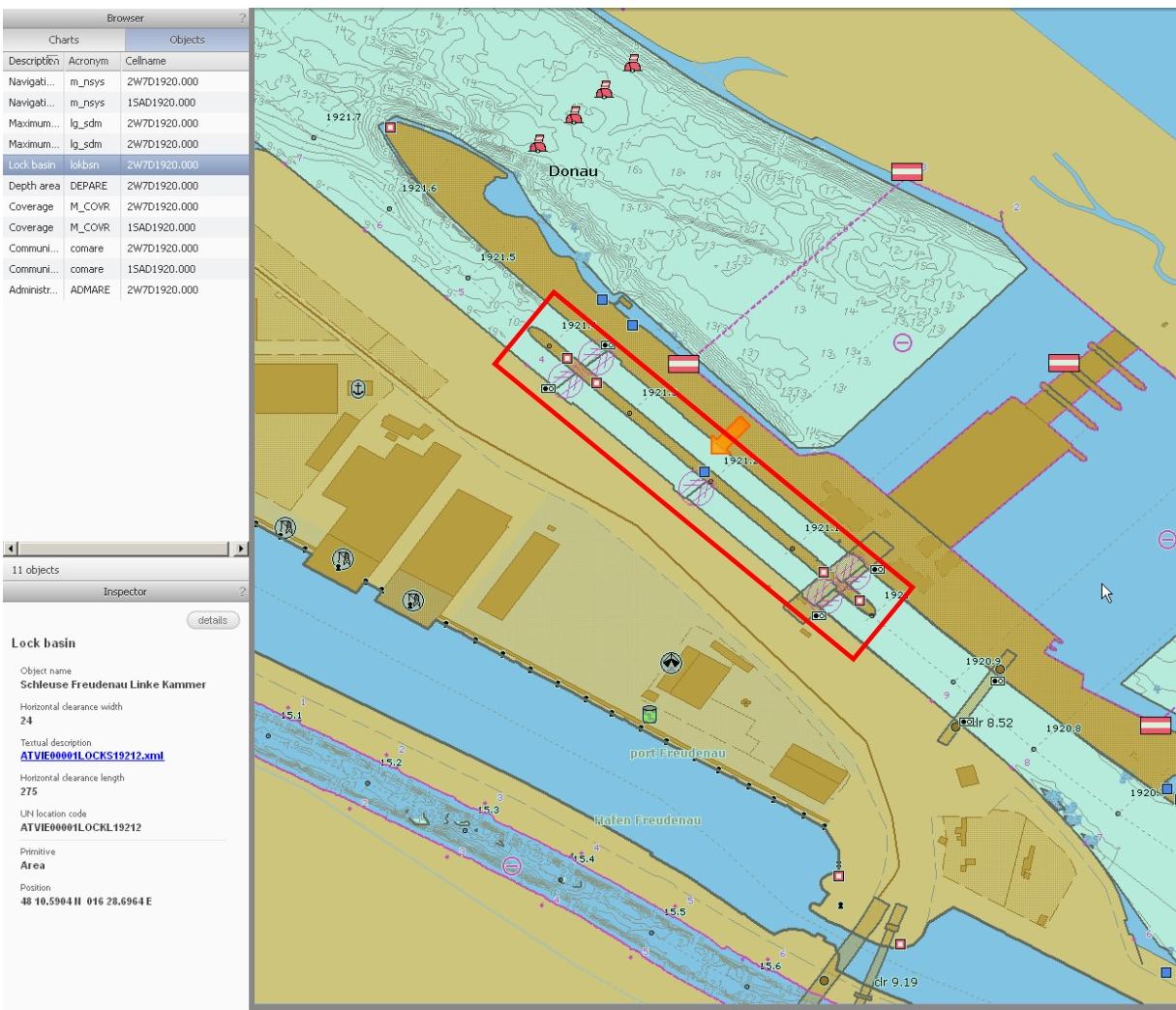
part:
val:
ate:



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Facility Information in ECDIS viewer



SeeMyENC Facility Information

Schleuse Freudeneau

Meta Information

- Facility Identification Number: **ATVIE00001LOCKS19212**
- Version: 4
- Last changes: 2008-07-15 @ 12:26
- Type of Facility: Lock
- Short Description:
- Operator: *via donau*
- Owner: *Verbund-Austrian Hydro Power AG*

Communication Information

Address of Facility

Street	Donau-City-Strasse 1
Postcode	1220
City	Wien
Country	Austria

Contact

Company	
Name/Function	
Phone	+43 504321 6690
Fax	+43 504321 6695
Email	schleusenaufsicht.freudeneau@via-donau.org
Url	www.doris.bmvt.gv.at
Url	www.via-donau.org
Remark	

Radio Communication

Calling Name	Schleuse Freudeneau
Channel	18



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Dynamic lock status based on ISRS code

IRIS
v2.2.1.4318

LOGOUT PRINT CONTACT HELP DE EN

Inbox Search **Traffic Data** Transport Data Vessel Data ERI Report Address list Emergency Emergency Data Grant access to own vessels My Data

Christoph, Plasil

Traffic, Transport and Fairway related information

Vessels V-Details Water level Lock state

List of locks
Austria - 8/31/11 4:20 PM

Lock	left chamber	right chamber
A Aschach	available	available
B Ottensheim	available	available
C Abwinden	available	available
D Wallsee	available	available
E Ybbs	available	available
F Melk	available	available
G Altenwoerth	available	available
H Greifenstein	available	available
Freudenau	available	available

Karte Satellit Hybrid

Freudenau
Left Chamber: available
Right Chamber: available
Timestamp: 8/31/11 4:20 PM
River-Km: 1921
Contact: Tel.: +43 (0) 504 321 6690
Fax: +43 (0) 504 321 6695
schleusenaufsicht.freudenau@via-donau.org

POWERED BY Google

Last update: Aug 31, 2011 4:21:48 PM

Water level information

Lock state

Hint: Click lock to display it on map

Show all locks Refresh

This project is co-funded by the European Commission within the „Trans European Networks – Transport“ programme.

map collection

Dor

14



Benefits of geo-ref. data management

- Ease maintenance of ref. data and reduce redundancy
 - Ref. data changes are (automatically) rolled out to applications
 - Connected service owner/provider do not need to maintain geo-reference data
 - Interoperability between RIS services
- There is a need for uniform RIS reference data management considering all RIS services



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viadonau

Thank you for your attention!

Christoph Plasil

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